

REMARKS

Claims 1-6, 8-9, 11-15, 17-21, 23-24, 26-35, 37, 42-46, 48-49, and 51-55 are currently pending in the application. Of these claims, claims 1, 12, 18, 23, 32, 35, 42, and 51 are independent.

Non-Statutory Subject Matter Rejections

Claims 32-35 and 37 are rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

Applicant respectfully traverses these rejections as follows.

Applicant respectfully submits claims 32-35 and 37 as amended are more clearly directed to statutory subject matter.

Applicant therefore respectfully submits these rejections have been overcome and should accordingly be withdrawn.

Shenk Rejections

Claims 12, 18, 23, 25, 31, 35, and 37 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,513,392 to Shenk ("Shenk").

Applicant respectfully traverses these rejections as follows.

Noting claim 25 has been canceled without prejudice or disclaimer, Applicant respectfully submits this rejection of claim 25 is no longer applicable.

Independent claims 12 and 18 recite a usage bit to indicate whether a corresponding entry was accessed during a corresponding one of a given number of clock periods.

Independent claims 23 and 35 recite a usage bit to indicate whether a corresponding entry was accessed during a corresponding one of a predetermined number of clock periods.

Applicant respectfully submits Shenk did not teach or suggest such feature(s) as claimed.

Noting the remaining rejected claims depend from independent claim 23 or 35, Applicant therefore respectfully submits these rejections have been overcome and should accordingly be withdrawn.

Note that there may be additional reasons for the patentability of claims. For example, there may be additional reasons why the dependent claims are patentable.

Emma Rejections

Claims 12-14, 18-19, 23-25, 31, 35, 37, and 51-56 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,389,505 B1 to Emma et al. ("Emma").

Applicant notes Emma issued on May 14, 2002 and therefore does not constitute prior art under 35 U.S.C. § 102(b).

Applicant nevertheless respectfully traverses these rejections as follows.

Noting claims 25 and 56 have been canceled without prejudice or disclaimer, Applicant respectfully submits these rejections of claims 25 and 56 are no longer applicable.

Independent claims 12 and 18 recite a usage bit to indicate whether a corresponding entry was accessed during a corresponding one of a given number of clock periods.

Independent claims 23, 35, and 51 recite a usage bit to indicate whether a corresponding entry was accessed during a corresponding one of a predetermined number of clock periods.

Applicant respectfully submits Emma did not teach or suggest such feature(s) as claimed.

Noting the remaining rejected claims depend from independent claim 12, 18, 23, 35, or 51, Applicant therefore respectfully submits these rejections have been overcome and should accordingly be withdrawn.

Note that there may be additional reasons for the patentability of claims. For example, there may be additional reasons why the dependent claims are patentable.

Mizuno Rejections

Claims 23, 25, 31, 35, and 37 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,285,626 B2 to Mizuno et al. ("Mizuno").

Applicant respectfully traverses these rejections as follows.

Noting claim 25 has been canceled without prejudice or disclaimer, Applicant respectfully submits this rejection of claim 25 is no longer applicable.

Independent claims 23 and 35 recite a usage bit to indicate whether a corresponding entry was accessed during a corresponding one of a predetermined number of clock periods.

Applicant respectfully submits Mizuno did not teach or suggest such feature(s) as claimed.

Noting the remaining rejected claims depend from independent claim 23 or 35, Applicant therefore respectfully submits these rejections have been overcome and should accordingly be withdrawn.

Note that there may be additional reasons for the patentability of claims. For example, there may be additional reasons why the dependent claims are patentable.

Garney Rejection

Claim 29 is rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. 2002/0199152 A1 to Garney et al. ("Garney").

Applicant respectfully traverses this rejection as follows.

Applicant notes claim 29 depends from independent claim 23. Although independent claim 23 is not explicitly rejected over Garney, claim 23 must be considered as rejected over Garney if claim 29 is to be considered as rejected over Garney.

Claim 23 recites a usage bit to indicate whether a corresponding entry was accessed during a corresponding one of a predetermined number of clock periods.

Applicant respectfully submits Garney did not teach or suggest such feature(s) as claimed.

Applicant therefore respectfully submits this rejection has been overcome and should accordingly be withdrawn.

Note that there may be additional reasons for the patentability of claim 23 and/or 29.

Swaminathan Rejections

Claims 23, 51, and 55 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. 2003/0046487 A1 to Swaminathan ("Swaminathan").

Applicant respectfully traverses these rejections as follows.

Independent claims 23 and 51 recite a usage bit to indicate whether a corresponding entry was accessed during a corresponding one of a predetermined number of clock periods.

Applicant respectfully submits Swaminathan did not teach or suggest such feature(s) as claimed.

Noting claim 55 depends from independent claim 51, Applicant therefore respectfully submits these rejections have been overcome and should accordingly be withdrawn.

Note that there may be additional reasons for the patentability of claims. For example, there may be additional reasons why the dependent claim is patentable.

Ramakrishnan, De Martine, and/or Davis Rejections

Claims 1-6, 11, 15, 26-30, and 32-34 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,636,355 to Ramakrishnan et al. ("Ramakrishnan") and U.S. Patent No. 5,619,675 to De Martine et al. ("De Martine").

Claims 8-9, 17, 20-21, 42-45, and 48-50 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ramakrishnan, De Martine, and U.S. Patent Application Publication No. 2003/0023922 A1 to Davis et al. ("Davis").

Applicant respectfully traverses these rejections as follows.

Noting claim 50 has been canceled without prejudice or disclaimer, Applicant respectfully submits this rejection of claim 50 is no longer applicable.

Applicant notes claims 15, 17, and 49 depend from independent claim 12, claims 20-21 depend from independent claim 18, and claims 26-30 depend from independent claim 23. Although independent claims 12, 18, and 23 are not explicitly rejected over Ramakrishnan, De Martine, and/or Davis, they must be considered as rejected over Ramakrishnan, De Martine, and/or Davis if their dependent claims are to be considered as rejected over Ramakrishnan, De Martine, and/or Davis.

Independent claims 1 and 32 recite a setting of a usage bit during a writeback cycle to write data read from a memory back to the memory.

Independent claims 12, 18, and 23 recite update of a usage bit for an entry read from a memory during a writeback cycle to write the read entry back to the memory.

Independent claim 42 recites update of a usage bit during a writeback cycle to rewrite a corresponding entry destroyed during a read from a memory back to the memory.

Applicant respectfully submits none of Ramakrishnan, De Martine, and Davis, whether alone or in any obvious combination with one another, taught or suggested such feature(s) as claimed.

More particularly, Applicant respectfully submits that Ramakrishnan taught that a block is written from a cache to a disk. See, e.g., Ramakrishnan in box 23 of Figure 1 and column 7 at lines 55-58. Applicant respectfully submits that Ramakrishnan did not teach or suggest any writeback cycle to write a block read from a cache back to the cache.

Noting the remaining rejected claims depend from independent claim 1, 12, 18, 23, 32, or 42, Applicant therefore respectfully submits these rejections have been overcome and should accordingly be withdrawn.

Note that there may be additional reasons for the patentability of claims. For example, there may be additional reasons why the dependent claims are patentable.

It is respectfully submitted this patent application is in condition for allowance, for which early action is earnestly solicited.

The Examiner is invited to telephone the undersigned to help expedite the prosecution of this patent application.

Respectfully submitted,

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/Matthew C. Fagan, Reg. No. 37,542/
Matthew C. Fagan
Registration No. 37,542
Telephone: (512) 732-3936
Facsimile: (512) 732-3912 (please call first)

c/o Blakely, Sokoloff, Taylor & Zafman, L.L.P.
12400 Wilshire Boulevard, Seventh Floor
Los Angeles, California 90025
Telephone: (503) 439-8778
Telephone: (310) 207-3800